

**IN THE UNITED STATES DISTRICT COURT FOR
THE NORTHERN DISTRICT OF OHIO
EASTERN DIVISION**

TERVES LLC,

Plaintiff

vs.

YUEYANG AEROSPACE NEW
MATERIALS CO., LTD., et al.

Defendants.

Case No. 1:19-cv-1611-DCN

JUDGE DONALD C. NUGENT

**MOTION REGARDING PROSECUTION HISTORY ESTOPPEL,
CLAIM CONSTRUCTION AND EXPERT TESTIMONY**

Defendants file this Motion following on Plaintiff's filing of an office action response on January 19, 2022 in the pending '653 Patent reexamination. The response was 90 pages, and it took positions regarding multiple contested issues in this case, some of which are in direct conflict with Plaintiff's position in this litigation or in prior prosecution of its patents. In support of its office action response, Plaintiff submitted a 32-page declaration of its expert, Dr. Swanger. Dr. Swanger's new opinions are in conflict with the claim constructions in this case and with his own prior opinions and testimony in this case. It has also become clear that Plaintiff's patents have at least one inherent and material error.¹ In view of the foregoing developments and the positions Plaintiff and its expert took therein, Defendants ask for the following relief: a) Defendant be granted the opportunity to redepose Dr. Swanger's on his new opinions and the rationale behind the change in his opinions, b) the Court reexamine the claim constructions in view of the

¹ On February 11, 2022, Defendants made Plaintiff aware of this error and Defendant responded with non sequiturs and have failed to candidly disclose the error to the USPTO in the pending reexamination.

conflicting positions Plaintiff took at the USPTO as compared to its position at the claim construction phase, c) the Court take into account Plaintiff's failure to notify the USPTO of material errors in its '653 Patent during the reexamination process as additional evidence of inequitable conduct, and d) the Court take into account Plaintiff's new claim construction of "intermetallic" while considering Defendant's pending summary judgment motion; e) in addition, or in the alternative, Plaintiff should be estopped from arguing at trial any position inconsistent with positions it took before the USPTO.

APPLICABLE LAW

"Claims may not be construed one way in order to obtain their allowance and in a different way against accused infringers." *Southwall Techs, Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1576 (Fed. Cir. 1995).

Arguments made during prosecution of a patent may narrow the scope of patent claims, and the limitation may go beyond the embodiments shown in the prior art about which the arguments were made. *Southwall*, 54 F.3d at 1581. "[A]ny argument made regarding the need to distinguish prior art...does create a separate estoppel, regardless of other distinctions made." *Id.* at 1583. "Clear assertions made during prosecution in support of patentability, whether or not actually required to secure allowance of the claim, may also create an estoppel." *Id. (relying on Texas Instrum., Inc. v. United States ITC*, 988 F.2d 1165, 1174 (Fed. Cir. 1993)).

In construing disputed claim terms, the court should consider the prosecution history to determine whether any interpretations may have been disclaimed during prosecution in order to obtain allowance. *ZMI Corp. v. Cardiac Resucitator Corp.*, 844 F.2d 1574, 1580 (Fed. Cir. 1988). *Accord Brown & Williamson Tobacco Corp. v. Phillip Morris*, 1999 U.S. Dist. Lexis 22252, *82

(W.D. Ky. Apr. 1, 1999) (quoting the applicant’s arguments made during prosecution to assist in construing a claim term).

BACKGROUND

During claim construction, Plaintiff argued that an “intermetallic phase” was simply a mixture of two or more metals while Defendants argued that it was a solid phase with two or more metallic or semi-metallic elements “with an ordered structure and well-defined and fixed stoichiometry.”² [Dkt. 36, p.8 of 28.] The Court adopted Plaintiff’s construction. [Dkt. 89, pp. 5, 6.] Now, Plaintiff’s expert is arguing exactly the opposite to the USPTO, advancing the position that Defendants advanced during claim construction. (Exhibit 1, Swanger’s Jan. 14, 2022 decl. at ¶ 40.) Plaintiff’s shifting position on this claim term runs headlong into the Federal Circuit’s admonition that “[c]laims may not be construed one way in order to obtain their allowance and in a different way against accused infringers.” *Southwall*, 54 F.3d at 1576.

A. Dr. Swanger’s opinions have shifted on some subjects, and he offers new opinions, both of which require a new deposition.

The purpose of requiring expert reports is to nail down the nature of opinions an expert will offer at trial. See, for example, Plaintiff’s Motion to Strike Dr. Medlin’s six paragraph, two-page declaration. [Dkt. 150.] Imagine how incensed Plaintiff would have been if Dr. Medlin submitted a 32-page declaration. However, Defendants do not have the option to move to strike Dr. Swanger’s recent declaration from the *ex parte* proceeding at the USPTO. However, to the

²Stoichiometry is a fundamental chemistry term which defines the relationship between the relative quantities of substances taking part in a reaction or forming a compound, typically a ratio of whole integers. See “Stoichiometry.” Merriam-Webster.com Dictionary, Merriam-Webster, <https://www.merriam-webster.com/dictionary/stoichiometry>. Accessed 24 Feb. 2022. In lay terms, two hydrogen atoms, H, combine with one oxygen atom, O, to form water, H₂O.

extent they bear on this proceeding and what testimony he may give at trial, Defendants' need the opportunity to depose Dr. Swanger.

Defendants do not intend to delineate every area of inquiry for a supplemental deposition of Dr. Swanger unless the Court requires such a procedure.³ However, Defendants offer one telling example to illuminate the concerns presented by Dr. Swanger's expansive new affidavit.

Leading up to the Court's claim construction ruling, Defendants argued that an "intermetallic phase" was a "solid phase involving two or more metallic or semi-metallic elements with an ordered structure and well-defined and fixed stoichiometry." [Dkt. 89, Order on Claim Const. p.6.] Plaintiff rejected Defendants' construction and argued that "intermetallic phase" only required it to be solid and to "contain magnesium or a magnesium alloy and an additive material." [Id. p.6.] The Court adopted the construction urged by Plaintiff. [Id., p.7.]

Dr. Swanger provided testimony in support of Plaintiff's position regarding the proper construction of "intermetallic particle."⁴

[Defendants' expert] Dr. Medlin states that "A POSITA [person of skill in the art] would understand that intermetallic phases or compounds have a fixed stoichiometry."⁵ *This is incorrect on its face.* The binary phase diagrams for two of the examples cited in the '010 and '653 Patents...each show an intermetallic phase with a range of composition, not a fixed stoichiometry, namely CuMg₂ and Mg₂Ni. A POSITA would understand that more than one intermetallic phase is possible, and that intermetallic phases can occur at fixed stoichiometries...or that *they can occur within a range of compositions.*

³ Oral examination under oath often results in the best, most candid answers from the witness when they are the sole product of his mind rather than the result of consultations with counsel to develop the answer most conducive to the party's position in litigation.

⁴ To be sure, Dr. Swanger hedged his bets a little, but his opinions plainly advocated for the position that Plaintiff argued to the Court.

⁵ Fixed stoichiometry means a fixed ratio of metals in the intermetallic, such as Mg₂Ni – exactly two magnesium atoms for every nickel atom.

(Exhibit 2, May 4, 2020 Rebuttal Report of Lee A. Swanger at 8 (emphasis added).) That is, Dr. Swanger argued that Dr. Medlin’s opinion to “understand that intermetallic phases or compounds have a fixed stoichiometry” was incorrect on its face. So as of May 4, 2020 Dr. Swanger argued that “intermetallics” do not have fixed stoichiometry. Dr. Swanger’s opinion in his final July 27, 2021 report adopted the Court’s claim construction: “Intermetallic Phase: solid compound that has a combination of two or more metals.” (Exhibit 3, July 27, 2021 Swanger Rep. at 4.)

Now, compare Dr. Swanger’s new definition of “intermetallic” in his recent 32-page USPTO declaration:

40. A POSITA would understand that *an intermetallic compound is a special case of the reaction of two metals to form a specific stoichiometric compound with a specific chemistry and crystal structure*. An intermetallic compound is differentiated from a binary metal alloy, which can have any arbitrary ratio of two metals. Copper and nickel, for example, can be combined in any ratio, and the resultant metal alloy will be a uniform solution of copper in nickel, or nickel in copper. No unique compounds with fixed chemistry or new crystallographic structures occur in the copper-nickel system.

(Exhibit 1, Jan. 14, 2022 Swanger Decl.) That is, Dr. Swanger did a 180 and advanced the precise construction Defendants argued to the Court. Plaintiff’s shifting position on this claim term runs headlong into the Federal Circuit’s admonition that “[c]laims may not be construed one way in order to obtain their allowance and in a different way against accused infringers.” *Southwall*, 54 F.3d at 1576. Defendants need the opportunity to ask Dr. Swanger which position he will argue to the jury at trial. Does an “intermetallic” have a “fixed stoichiometry” or not?

B. The Court should reexamine the claim constructions in view of the conflicting positions Plaintiff took at the USPTO as compared to its position at the claim construction phase.

As Defendants just discussed, at claim construction, the Plaintiff argued that an intermetallic phase was a “compound that has two or more metals.” [Dkt. 50, PageID# 5049.] The Defendants’ proposed that intermetallic phase should be defined as “solid phase involving two or more metallic or semi-metallic elements with an ordered structure and well-defined and well-defined and fixed stoichiometry.” [Dkt. 50, PageID# 5049]. The Court adopted Plaintiff’s construction. [Dkt. 89, PageID# 6349].

But, in its USPTO filings, Plaintiff submits Dr. Swanger’s view that intermetallic particles do have a fixed stoichiometry:

The ‘795 Reexam identifies Mg_2Cu and Mg_2Ni as examples of the galvanically-active precipitates or galvanically-active intermetallic particles. The phase diagrams for the Mg-Cu and Mg-Ni systems...show that when copper is added to magnesium, Mg_2Cu is the first intermetallic compound to form. Similarly, when nickel is added to magnesium, Mg_2Ni is the first intermetallic compound to form.

(Exhibit 1, Jan. 14, 2022 Swanger Decl. at ¶ 38) Mg_2Cu and Mg_2Ni are examples of compounds with fixed stoichiometries of the type that Plaintiff eschewed during claim construction.

The motivation for Plaintiff’s change of heart is obvious. It had to make that argument to have a prayer of getting claims allowed in the reexam because the USPTO found that Xiao anticipates the ‘653 patent. The argument that Plaintiff is now using to attempt to secure allowed claims is contrary to the positions it took earlier during claim construction.

Fixed stoichiometric ratios of magnesium-nickel and magnesium-copper compounds are prime examples of an “intermetallic particle” under the definition urged by Defendants during claim construction.

Finally, Dr. Swanger made an astonishing admission that there is no real way to know what is happening in any of the alloys at issue in this case.

Phase diagrams with three elements are complex, phase diagrams with four or more phases do not generally exist, and phase diagrams for an alloy with eight elemental components are essentially impossible to determine. As a result, a POSIT A would have no idea, based on thermodynamics or chemistry, as to what phases would exist in Xiao's examples.

(*Id.* at ¶ 31) All of the claims in the patents at issue in this case can contain four or more components. See '653 Patent independent claims 1, 12, 25, 29, 33, 37, 41, 45, 49, 73, 74. Dr. Swanger admitted that no POSITA could determine what phases would exist in such materials with four or more components. These admissions have striking implications for claim construction and invalidity analysis.

This Motion is being filed to apprise the Court of the issues that exist and to ask the Court to establish a new briefing schedule. Given how recent Plaintiff's new positions are and how quickly the trial setting is approaching, Defendants have erred on the side of getting this Motion on file as compared to comprehensively addressing all the claim construction issues that need to be revisited. It could be that the Court would prefer to address Defendants' concerns by way of a motion in limine filed by Defendants seeking to limit Plaintiff's argument on specific issues to the positions it took before the USPTO. However, the motion in limine route only goes so far. It does not, for example, address what to do about the fact that the Plaintiff argued one construction of "intermetallic" to the Court, a construction the Court accepted, and then argued a different construction to the USTPO in an effort to secure allowed claims.

C. Plaintiff has failed to notify the USPTO of material errors in its ‘653 patent during the reexamination process, and Defendants ask the Court to take those facts into account in ruling on the pending summary judgment motions.

Throughout a patent reexam, the patent owner owes a duty to disclose all material information to the USPTO.

A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective reexamination occurs when, at the time a reexamination proceeding is being conducted, the Office is aware of and evaluates the teachings of all information material to patentability in a reexamination proceeding. Each individual associated with the patent owner in a reexamination proceeding has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability in a reexamination proceeding.

37 C.F.R. § 1.555(a). The Defendants in their motion for summary judgment have demonstrated Plaintiff's failure to disclose material information to the USPTO. Plaintiff's failure continues to this day and is becoming more obviously intentional.

Example 1 from the ‘653 Patent recites an example alloy implementing the teachings of the purported invention. See adjacent figure. Defendants notified the Plaintiff that there is a material error in Example 1 of the ‘653 Patent. (Exhibit 4, Feb. 11, 2022 Letter from Ed White to Plaintiff's Counsel.)⁶ ‘653 Patent Example 1 claims a cast alloy with a dissolution rate of

EXAMPLE I

An AZ91D magnesium alloy having 9 wt. % aluminum, 1 wt. % zinc and 90 wt. % magnesium was melted to above 800° C. and at least 200° C. below the melting point of nickel. About 7 wt. % of nickel was added to the melt and dispersed. The melt was cast into a steel mold. The cast material exhibited a tensile strength of about 14 ksi, an elongation of about 3%, and shear strength of 11 ksi. The cast material dissolved at a rate of about 75 mg/cm²-min in a 3% KCl solution at 90° C. The material dissolved at a rate of 1 mg/cm²-hr in a 3% KCl solution at 21° C. The material dissolved at a rate of 325 mg/cm²-hr. in a 3% KCl solution at 90° C.

Example 1: ‘653 Patent, Col. 17

⁶ Defendants focused on the obvious examples recited herein, but those are by no means is the only inconsistency or apparent error that exists in the patents in suit. In addition, it does not appear that during discovery the experimental results were produced that support the examples recited in the patents.

75 per *minute*.⁷ A straightforward unit conversion of that dissolution rate results in a value of 4,500 per *hour* in the same remaining units at the same conditions. Example 1 later sites a dissolution rate of 325 per hour in the same units at the same conditions. These claims cannot both be true. Any typographical or technical errors in Example 1 should be brought to the attention of the USPTO and the Plaintiff has failed to notify the USPTO.

This example is particularly material to the reexamination process and this litigation because Plaintiff claims a dissolution rate of 325 mg/cm²·hr in claims 9, 18, 23, 26, 30, 34, 38, 42, 46, 66, 67, 74 as a top end of a range of dissolution rates. So, what is this upper limit? Is it of 75 per minute, which converts to 4,500 per hour or is it 325 per hour?

Plaintiff's shifting claim definitions also impact Defendant's motion for summary judgement. In his May 4, 2020 Rebuttal Report, Dr. Swanger opined that intermetallics with fixed stoichiometry "*is incorrect on its face*," (Exhibit 2, May 4, 2020 Rebuttal Report of Lee A. Swanger at 8 (emphasis added)), but on Jan 14, 2022 the "795 Reexam identifies Mg₂Cu and Mg₂Ni as examples of the galvanically-active precipitates or galvanically-active intermetallic particles," (Exhibit 1, Jan. 14, 2022 Swanger Decl at ¶ 38). If fixed stoichiometry is required as Plaintiff now asserts, then Plaintiff has not proven that Defendant's alleged infringing products infringe any of Plaintiff's patents. Plaintiff has not even mentioned a fixed stoichiometry in Defendant's alleged infringing products let alone proven that Defendant's products infringe any of Plaintiff's patents. Defendant's motion for summary judgement should be granted.

⁷ Actual units and conditions are mg/cm²·min in 3% KCl solution at 90°C.

D. Conclusions.

Plaintiff should be estopped from arguing at trial any position inconsistent with positions it took before the USPTO. Given the shifting sands of Plaintiff's claim construction, it should be estopped from using its results-oriented construction. In addition, Defendant respectfully requests the following relief:

1. Defendant be granted the opportunity to redepose Dr. Swanger's on his new opinions and the rationale behind the change in his opinions;

2. The Court reexamine the claim constructions in view of the conflicting positions Plaintiff took at the USPTO as compared to its position at the claim construction phase;

3. The Court take into account Plaintiff's failure to notify the USPTO of material errors in its '653 Patent during the reexamination process as additional evidence of inequitable conduct;

4. The Court take into account Plaintiff's new claim construction of intermetallic compounds while considering Defendant's pending summary judgment motion; and

5. In addition, or in the alternative, Plaintiff should be estopped from arguing at trial any position inconsistent with positions it took before the USPTO.

Dated: Feb. 25, 2022.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I certify that on Feb. 25, 2022, I electronically transmitted the foregoing document to the Clerk of the Court using the ECF system for filing and transmittal of a Notice of Electronic Filing to the following ECF registrants:

David B. Cupar
Matthew J. Cavanagh
Andrew D. Gordon-Seifert

/s/ Edward L. White
Edward L. White, Esq.